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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,231	12/29/2000	Richard N. Ellson	7610-0040	8767

23980 7590 05/28/2003

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EXAMINER
TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
1639	11

DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N.	Applicant(s)	
	09/751,231	ELLSON ET AL.	
	Examiner	Art Unit	
	My-Chau T. Tran	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) *11-18,50-53,55,57 and 58* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,19-49,54 and 56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *03 March 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *9* .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other:

DETAILED ACTION

1. Applicant's amendment filed 3/3/03 in Paper No. 10 is acknowledged and entered. Claims 59-80 are canceled by the amendment. Claims 1, 3, 50, 54, and 56 are amended by the amendment.

2. Claims 1-58 are pending.

Drawings

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 3/9/03 has been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

4. It is noted that ***Claims 50-53*** were inadvertently not included with Claims 59-80 that were withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7.

5. It is also noted that ***Claims 50-53*** were inadvertently included with the rejections 35 USC 112, second paragraph. Therefore, the rejection is withdrawn since ***Claims 50-53*** were withdrawn from further consideration.

Withdrawn Rejections

6. The previous rejections 35 USC 112, second paragraph, for claims 1-10, 19-49, 54, and 56 have been withdrawn in view of applicant's amendment to claim 1 and arguments.

7. Claims 1-10, 19-49, 54, and 56 are treated on the merit in this Office Action.

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Maintained Rejections

Claim Rejections - 35 USC § 102

9. Claims 1-10, 19-33, 38-49, 54, and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Nova et al. (US Patent 5,874,214).

Nova et al. disclose a device that is combination of matrix materials with programmable data storage or recording devices (col. 4, lines 55-64). The matrices are generally insoluble materials used to immobilize ligands and other molecules (molecular probes) (col. 18, lines 33-39). The recording and storage device is in proximity with or in contact with the matrix (col. 5, lines 44-46). The recording device can detect the occurrence of a reaction and record the event in the memory (integrated indicators)(col. 37, lines 31-33). The sensor in the recording device would include a temperature sensor to record the temperature of the reaction (col. 38, lines 47-63; col. 49, lines 55-63; col. 53, lines 44-50) (referring to claims 5-6). Other type of sensors can be use in the combination of matrix materials with programmable data storage or recording

devices such as a photodetector to detect the occurrence of fluorescence or other optical emission (col. 6, lines 25-27) (referring to claims 19-23), or electromagnetic tagging (col. 14, lines 49-57) (referring to claims 19-23 and 49). The composition of matrices with memories and molecules would include biological particles such as oligonucleotides, peptides, proteins, and cells (col. 10, lines 1-6) (referring to claims 28-32). The matrix would be in the form of a continuous surface such as a microtitre dish, or a glass slide (col. 12, lines 60-63) (referring to claims 33 and 43-46).

The features of remaining independent and dependent claims are either specifically described by the reference (e.g. detection time or reaction time), or constitute obvious variations in parameters which are routinely modified in the art (e.g. reaction temperature), and which have not been described as critical to the practice of the invention.

10. Claims 1, 43, and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Virtanen (US Patent 6,342,349 B1).

Virtanen disclose a device comprise of an optical disk having a plurality of analyte-specific signal elements that is cleavable and the signal is detected from the cleave signal element (col. 7, lines 29-35). The cleavable signal element comprises a signal responsive moiety (indicator) attached to the cleavable spacer at its signal responsive end (probe) (col. 5, lines 30-36). The cleavable spacer has a substrate-attaching end. The device of Virtanen anticipates the presently claimed invention.

Claim Rejections - 35 USC § 103

11. Claims 1 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nova et al. (US Patent 5,874,214) in view of Wang et al. (US Patent 5,922,617).

The device of Nova et al. is applied for the reasons discussed above.

The device of Nova et al. does not expressly disclose that the array comprises of 10, 50,000, 200,000, or 1,000,000 probes on the substrate surface.

Wang et al. disclosed a device in which the microarray would contain 10 or more probes (col. 2, lines 60-65). Wang et al. suggest that the number of individually addressable sites (probes) on an array would depend on the nature of the bound component, the source of the signal, the nature of the signal being detected, the nature of the bound array such as the size of the microarray or the manner in which it is produced (col. 3, lines 6-11).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include an array of 10 or more probes on the surface of the substrate as taught by Wang et al. for the device of Nova et al. One of ordinary skill in the art would have been motivated to include an array of 10 or more probes on the surface of the substrate in the device of Nova et al. for the advantage of detecting multiple analytes. Since both Nova et al. and Wang et al. disclose a device for detecting multiple analytes (Nova: col. 43, lines 26-28; Wang: col. 2, lines 49-59). Further, Wang et al. suggest that the number of probes on an array would depend on the nature of the bound component, the source of the signal, the nature of the signal being detected, the nature of the bound array such as the size of the microarray or the manner in which it is produced (col. 3, lines 6-11). Therefore, the choice of the number of probe on the surface of the substrate would depend on the availability of bound component and signal used.

Response to Arguments

12. Applicant's arguments in view of the rejection under 35 U.S.C. 102(b) of Claims 1-10, 19-33, 38-49, 54, and 56 as being anticipated by Nova et al. (US Patent 5,874,214) filed on 3/3/03 have been fully considered but they are not persuasive.

Applicant contends that Nova et al. do not anticipate the presently claimed device because Nova et al. do not teach or suggest an indicator that exhibits a response that is detectable for at least one minute after removal of the indicator from the condition triggering the response.

It is the examiner position that Nova et al. do anticipate the presently claimed device. The limitation of "the indicator response is detectable for at least one minutes after removing the indicator from the condition" does not bear any patentable weight. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." See *Ex parte* Thibault, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re* Young, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re* Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). That is the manner or method in which the "indicator" is to be utilized is not germane to the issue of patentability of the device itself. Therefore the device Nova et al. anticipates the presently claimed device because Nova et al. teach all the structural limitations of the presently claimed device, which are a substrate, a plurality of probes, and an indicator.

13. Applicant's arguments in view of the rejection under 35 U.S.C. 102(e) of Claims 1, 43, and 56 as being anticipated by Virtanen (US Patent 6,342,349 B1) filed on 3/3/03 have been fully considered but they are not persuasive.

Applicant alleges that Virtanen does not anticipate the presently claimed device because Virtanen does not teach or suggest an indicator that exhibits a response that is detectable for at least one minute after removal of the indicator from the condition triggering the response.

It is the examiner position that Virtanen does anticipate the presently claimed device. The limitation of "the indicator response is detectable for at least one minutes after removing the indicator from the condition" does not bear any patentable weight. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." See *Ex parte* Thibault, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re* Young, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re* Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). That is the manner or method in which the "indicator" is to be utilized is not germane to the issue of patentability of the device itself. Therefore the device Virtanen anticipates the presently claimed device because Virtanen teaches all the structural limitations of the presently claimed device, which are a substrate, a plurality of probes, and an indicator..

14. Applicant's arguments in view of the rejection under 35 U.S.C. 103(a) of Claims 1 and 34-37 as being unpatentable over Nova et al. (US Patent 5,874,214) in view of Wang et al. (US Patent 5,922,617) filed 3/3/03 have been fully considered but they are not persuasive.

Applicant argues that Nova et al. in view of Wang et al. do not anticipate the presently claimed device because Nova et al. do not teach or suggest an indicator that exhibits a response that is detectable for at least one minute after removal of the indicator from the condition triggering the response.

It is the examiner position that Nova et al. do anticipate the presently claimed device as discussed above. Therefore, Claims 1 and 34-37 as being unpatentable over Nova et al. in view of Wang et al.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Chau T. Tran whose telephone number is 703-305-6999.

The examiner is on ***Increased Flex Schedule*** and can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Wang can be reached on 703-306-3217. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1123.

mct
May 23, 2003

PADMASHRI PONNALURI
PRIMARY EXAMINER